



04/07/2015

United States Department of Agriculture Animal and Plant Health Inspection Service 4700 River Road Riverdale, MD 20737

Permit to Receive Soil Regulated by 7 CFR 330

This permit was generated electronically via the ePermits system.

DATE ISSUED:

PERMITTEE NAME: Dr. Kara Nelson PERMIT NUMBER: P330-18-00223

COMPANY: APPLICATION NUMBER: P525-180412-001

Berkeley

RECEIVING ADDRESS: 410 OBrien Hall

University of California

MAILING ADDRESS: Berkeley, CA 94720 CEE Dept MS 1710

University of California Berkeley, CA 94720-1710

PHONE: (510) 643-5023

FAX: EXPIRES: 07/13/2021

PORTS OF ARRIVAL/PLANT INSPECTION STATIONS: AK, Anchorage; AL, Huntsville; AL, Mobile; AZ, Douglas; AZ, Lukeville; AZ, Naco; AZ, Nogales; AZ, Phoenix; AZ, San Luis; AZ, Tucson; CA, Calexico; CA, El Segundo; CA, Fresno; CA, Long Beach; CA, Oakland; CA, Ontario; CA, Otay Mesa; CA, Port Hueneme; CA, Sacramento; CA, San Diego; CA, San Francisco; CA, San Jose; CA, San Ysidro; CA, Tecate; CO, Denver; CT, Hartford; CT, New Haven; DE, Dover; DE, Wilmington; FL, Ft. Lauderdale; FL, Ft. Myers; FL, Ft. Pierce; FL, Jacksonville; FL, Key West; FL, Miami; FL, Miami (Cargo, DHL, Fed Ex, UPS, etc.); FL, Orlando; FL, Pensacola; FL, Port Canaveral; FL, Port Everglades; FL, Sanford; FL, Tampa; FL, West Palm Beach; GA, Atlanta; GA, Savannah; GU, Agana; HI, Hilo; HI, Honolulu; HI, Kahului; HI, Kailua-Kona; HI, Lihue; ID, Eastport; IL, Chicago; IN, Indianapolis; KY, Louisville; MA, South Boston; MD, Baltimore; MD, Beltsville; ME, Bangor; ME, Calais; ME, Houlton; ME. Portland; MI, Detroit; MI, Port Huron; MI, Romulus; MI, Sault Saint Marie; MN, Duluth; MN, Grand Portage: MN, International Falls: MN, Minneapolis: MO, Kansas City: MO, St. Louis: MP, Commonwealth of the Northern Mariana Islands; MS, Gulfport; MS, Port Bienville; MT, Raymond; MT, Roosville; MT, Sweetgrass; NC, Raleigh, NC, Wilmington, ND, Dunseith, ND, Pembina, ND, Portal, NJ, Linden, NM, Albuquerque, NM, Columbus, NM, SantaTeresa; NV, Las Vegas; NY, Albany; NY, Alexandria Bay; NY, Brooklyn; NY, Buffalo; NY, Champlain, Rouses Point; NY, Jamaica; NY, Newburgh; OH, Ashtabula; OH, Cincinnati; OH, Cleveland; OH, Columbus; OH, Toledo; OH, Wilmington; OK, Oklahoma City; OR, Portland; PA, Allentown; PA, Harrisburg; PA, Philadelphia; PA, Pittsburgh; PA, Scranton; PR, Aguadilla; PR, Carolina; PR, Fajardo; PR, Mayaguez; PR, Ponce; RI, Warwick/Providence; SC, Charleston; TN, Memphis; TN, Nashville; TX, Austin; TX, Brownsville; TX, Corpus Christi; TX, Dallas; TX, Del Rio; TX, Eagle Pass; TX, El Paso; TX, Fabens; TX, Falcon; TX, Fort Hancock; TX, Galveston; TX, Hidalgo; TX, Humble; TX, Laredo; TX, Los Indios; TX, Pharr; TX, Port Arthur; TX, Presidio; TX, Progresso; TX, Rio Grande City; TX, Roma; TX, San Antonio; TX, Victoria; UT, Salt Lake City; VA, Dulles; VA, Norfolk; VI, St. Croix; VI, St. Thomas; VT, Berlin; WA, Blaine; WA, Oroville; WA, Port Angeles; WA, SeaTac; WA, Sumas; WI, Green Bay; WI, Milwaukee

HAND CARRY: Yes

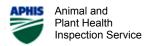
Under the conditions specified, this permit authorizes the following:

Quantity of Soil per Shipment and Treatment

Over 3 lbs - Your facility MUST be inspected and approved to receive this soil

SPECIAL INSTRUCTIONS TO INSPECTORS

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See permit conditions below

INSTRUCTIONS TO DHS CBP INSPECTORS FOR IMPORTED SOIL SHIPMENTS ROUTED TO RECEIVING FACILITY:

For hand carry of soil, an official of CBP Agricultural Programs and Trade Liaison (APTL) would have been notified to document and facilitate the entry of the soil (See hand carry conditions below if stipulated).

THIS PERMIT AUTHORIZES Kara Nelson TO HAND-CARRY THE REGULATED MATERIAL.

Otherwise:

- 1) Confirm that the shipment under this USDA PPQ P330 permit is under bond to the point of entry.
- 2) Validate the permit in ePermits using the CBP search feature.
- 3) Confirm that the imported shipment has a valid USDA PPQ Form 550 Black/White label.
- 4) Confirm that the shipment is being routed directly to a USDA-APHIS-PPQ Inspected Facility authorized to receive soil by logging onto:

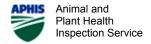
https://www.aphis.usda.gov/aphis/ourfocus/planthealth/import-information/permits/regulated -organism-and-soil-permits/sa soil/facilities.

5) For questions or concerns, contact the USDA-APHIS-PPQ Permit Unit in Riverdale, MD, at 866-524-5421 and ask to speak with a compliance officer.

PERMIT GUIDANCE

- 1) Receipt or use of foreign isolates or samples from countries under sanctions requires specific permission from the U.S. Department of Treasury; please refer to
- https://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx
- 2) This permit does not authorize importation, interstate movement, possession, and/or use of strains of genetically engineered regulated materials/organisms (created by the use of recombinant DNA technology).
- 3) If an animal pathogen is identified in your shipment, to ensure appropriate safeguarding, please refer to
- $http://www.aphis.usda.gov/import_export/animals/animal_import/animal_imports_anproducts.shtml\\$
- 4) If a human pathogen is identified, please refer to the CDC Etiologic Agent Import Permit Program at http://www.cdc.gov/od/eaipp/
- 5) This permit does not fulfill the requirements of other federal or state regulatory authorities. Please contact the appropriate agencies, such as the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U.S. Food and Drug Administration, the Centers for Disease Control and Prevention, the APHIS Veterinary Services unit, the APHIS Biotechnology Regulatory Services, or your State's Department of Agriculture to ensure proper permitting.
- 6) If you are considering renewal of this permit, an application should be submitted at least 90 days prior to the expiration date of this permit to ensure continued coverage. Permits requiring containment facilities may take a longer period of time to process.

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PERMIT CONDITIONS

CHEMICAL/PHYSICAL ANALYSIS AND DNA/RNA EXTRACTION

USDA-APHIS issues this permit to Kara Nelson with University of California, Berkeley. The permit authorizes the importation of soil from all foreign sources (except countries with sanctions or embargoes by U.S. State Department) only for chemical/physical analysis including the isolation and/or culture of Deoxyribonucleic Acid (DNA) or Ribonucleic Acid (RNA) in a controlled laboratory environment at the named facility on the permit.

HAND-CARRY

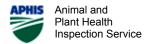
This permit also authorizes Kara Nelson to hand carry the regulated soil per hand carry conditions stipulated below.

- 1. You as the permit holder are responsible for maintaining a valid permit for as long as the soil is in your possession. APHIS does not issue extensions or renewals of existing permits; the permit holder must submit a new permit application at least three months prior to the expiration of this permit, and obtain a new permit to continue uninterrupted authorization for the soil approved under this permit.
- 2. If an accidental release into the environment occurs, notification must be made within one business day to APHIS, PPQ, 4700 River Rd., unit 133; Riverdale, MD 20737; 866-524-5421. A written report of the incident must be submitted identifying: (a) the name of the permit holder (responsible person), (b) the permit number, (c) the country or State of origin of the soil, (d) the nature of the release, and (e) measures already taken to contain, reduce or limit the effects of the accidentally released soil. Any plans prepared to contain, reduce or limit the effects of the accidentally released soil may be submitted as developed.

3.

- This permit is issued by the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). It conveys APHIS regulations and requirements for the material(s) listed on this permit. It does not reduce or eliminate your legal duty and responsibility to comply with all other applicable Federal and State regulatory requirements.
- The permit number or a copy of the permit must accompany the shipment.
- You must be an individual at least 18 years old, or legal entity such as partnership, corporation, association, or joint venture.
- You are legally responsible for complying with all permit requirements and permit conditions.

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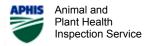


- The regulated material and shipping container(s) are subject to inspection by officials of Custom and Border Protection (CBP) and APHIS. CBP or APHIS officials may require the shipment to be treated, seized, re-exported, or destroyed (in part or whole). You will be responsible for expenses.
- If you violate any applicable laws associated with this permit, you may face substantial civil or criminal penalties. We may cancel all current permits and deny future permit applications.
- Without prior notice and during reasonable hours, authorized Federal and State Regulators must be allowed to inspect the conditions associated with the regulated materials/organisms authorized under this permit.
- 4. All solid wood packing material (SWPM) accompanying the shipment must be in compliance with ISPM 15 treatment regulations and IPPC stamp requirements and enforcement. Noncompliant shipments will be treated, re-exported or destroyed at the consignee's expense.
- 5. All operations must be consistent with information submitted in association with the above listed APHIS-PPQ inspected facility and subject to the conditions below.
- 6. Soil must be shipped in a securely closed, watertight container (primary container, test tube, vial, etc.) which must be enclosed in a second, durable watertight container (secondary container).
- 7. The shipment must be free from foreign matter or debris, plants and plant parts including noxious weeds and infestations by other macroorganisms such as insects, Cyst nematodes, mollusks and acari. Authorized material found to be commingled with unauthorized material will be subject to the same action (i.e. re-export, destruction) as unauthorized material.
- 8. The imported article can be released without treatment at the port of entry to the permittee's address listed on the permit or label or to an authorized user only if the final destination is an approved facility listed at
- https://www.aphis.usda.gov/aphis/ourfocus/planthealth/import-information/permits/regulated -organism-and-soil-permits/sa soil/facilities
- 9. The soil must not be used in field research or released into the environment before sterilization.

The soil must not be used for isolation or culture of organisms, or for extracting and concentrating organisms from the soil.

The soil must not be used as a growing medium.

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- 10. For soil samples that originate in Hawaii and Puerto Rico, a copy of this permit and the samples must be presented to APHIS-PPQ for inspection and clearance prior to shipment. For soil samples that originate in the U.S. Virgin Islands, a copy of this permit and the samples must be presented to DHS-CBP for inspection and clearance prior to shipment. Following inspection, soil shipments from Hawaii, Puerto Rico, and the U.S. Virgin Islands are authorized to enter at any arrival point on the mainland U.S.
- 11. Further distribution (intrastate or interstate) of soil is not allowed without prior approval from Federal officials [State Plant Health Director or designee] (or from Federal officials with State concurrence): Access the website at http://www.aphis.usda.gov/ppq/sphd/ for a list of State Plant Health Offices. Access the website at

http://nationalplantboard.org/member/index.html for a list of State Plant Regulatory Officials.

- 12. Further distribution of soil is not allowed without a permit from the receiving lab. While in storage, all soil must be kept locked (e.g. in freezer, cabinet) in the approved lab with access limited to authorized personnel or they will be in a restricted access building that requires a key card entry and access is restricted to authorized personnel only; or it must be in locked room restricted to authorized personnel only.
- 13. The soil must be handled as quarantined material until sterilized. This will include keeping the soil enclosed in containers when not in use and labeling all containers and/or storage areas:
- 14. All packing material, media, substrate, and shipping containers must be sterilized or destroyed as approved and prescribed by the permit conditions after removing the soil.
- 15. All unconsumed soil, containers and effluent must be autoclaved, incinerated or properly sterilized by the permittee at the conclusion of the project as approved and prescribed by the permit conditions.
- 16. Any water residues (effluent) from the processing of soil samples must be treated by an approved sterilization procedure such as hydroclave or autoclave.
- 17. All soil residues must be dry-heat treated, incinerated, hydroclaved or autoclaved or any other procedure approved by the Deputy Administrator.

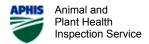
Dry Heat Treatment: use one of the following schedules:

110- 120.5 degrees C (230-249 F) for 16 hours 121-154 degrees C (250-309 F) for 2 hours 154.4 - 192.5 degrees C (310-379 F) for 30 minutes 193-220 degrees C (380-429 F) for 4 minutes 221-232 degrees C (430-450) for 2 minutes

Time starts when the entire sample reaches the required temperature, and a suitable temperature probe or currently calibrated thermometer must be used for verification.

Autoclaving Waste

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- a. Waste must be autoclaved at 121 degrees Centigrade (250 degrees Fahrenheit) for a minimum of 30 minutes.
- b. Autoclave tape or other indicators must be placed on each load prior to treatment. The autoclave tape or other indicator on each container must be checked to verify color change before disposal.
- c. The autoclave must be professionally calibrated annually and a written record must be maintained.
- d. Every 3 months, you must use a commercially available biological indicator kit that uses bacterial spores (e.g. Geobacillus species) that are rendered unviable at 121 degrees C. You must follow the manufacturery's instructions. If any growth is observed, you must have the autoclave serviced and retested.

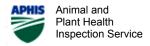
Incineration:

With the exception of metal and glass containers, all regulated and associated material must be reduced completely to ash at the end of the incineration cycle.

Hydroclave soil and other material using the following conditions:

- a. Soil must be hydroclaved at 121 degrees Centigrade (250 degrees Fahrenheit) for a minimum of 30 minutes, or at 132 degrees Centigrade (267 degrees Fahrenheit) for a minimum of 15 minutes.
- b. Hydroclaves vary; therefore, the manufacturery's recommendations for hydroclave usage and maintenance must be followed, and these instructions must be readily available for review by PPO.
- c. The hydroclave log must be completed by each user for each hydroclave cycle. All parameters must be noted as listed on the log for each hydroclave load.
- d. Observe the temperature sensor to ensure that the hydroclave maintains its required temperature. If the required temperature is not attained, you must contact the person responsible for maintaining the unit to initiate repairs. In the interim, waste must be treated either by an alternate treatment method, or transferred for treatment to another PPQ inspected facility, in accordance with conditions above.

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Gibbs Smith	07/13/2018





- 18. Equipment and supplies used to conduct operations or that have contacted the soil must be decontaminated using one of the following methods:
- (a) Material can be soaked in a fresh bleach solution of 10 percent (1:10) for at least 30 minutes. (1:10 is a convention that means 1 in 10 or1 part 9 parts = 10 parts total, which is a 10 percent solution)
- (b) Material can be soaked in 70 percent ethanol
- (c) Flamed with ethanol
- (d) Treated with quaternary ammonium compounds.

Note also that autoclaving, hydroclave, incineration, and dry heat sterilization are also acceptable sterilization/decontamination methods.

19. Upon issuance of this permit (i.e., a signed PPQ 330), you will need to request the PPQ Form 550 Black/White labels at least 5 days in advance of shipping date. If you applied online using ePermits, you may request the labels using the My Shipments/Labels feature. Otherwise, send your request to BlackWhiteGreenYellowlabelrequest@aphis.usda.gov. All email requests must come from the permit holder or appointee, if requested by the appointee the permit holder must be Ccýd on all requests. Specify the approved port as listed on the permit and the total number of labels needed in multiples of four. You may request additional labels the same way. We will send you the labels by email as a pdf.

However, the PPQ Form 550 Black/White label is not required on shipments of soil that originate in Hawaii, Puerto Rico, and the U.S. Virgin Islands

A label must be attached with clear tape to the exterior of each package being imported under this permit. The labels will include detailed shipping instructions. You are responsible for instructing your shipper to carefully follow these instructions. You are responsible for each import shipping label issued under this permit.

All labels must be printed in color. Failure to do so may result in refused entry or destruction of your package.

Enclose the following supplemental information in each shipment:

- Permittee Name
- Permit number
- Label number

Underlying packaging/wrapping must carry the address, billing, and any other information required to direct the shipment to its final destination (i.e., the permit holder's address; N.B., USDA APHIS does not defray any additional shipping costs incurred for transiting the shipment through an inspection station as the initial US destination).

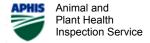
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DATE

07/13/2018

WARNING: Any alteration, forgery or unauthorized use of this Federal Form is subject to civil penalties of up to \$250,000 (7 U.S.C.s 7734(b)) or punishable by a fine of not more than \$10,000, or imprisonment of not more than 5 years, or both (18 U.S.C.s 1001)





- 20. The following conditions apply to all authorized hand carry events. Note that no PPQ-issued labels are required for hand carry events.
- a) At least 20 days prior to each hand carry event, the permit holder or designee must notify the PPQ Permit Compliance Officer by email. In the subject line of the email, write "Notification of Hand Carry Permit # xxxx":

For pests/pathogens, federal noxious weeds/parasitic plants, and host plant materials, please use: redandwhitelabelrequest@aphis.usda.gov
For restricted or prohibited plant materials, please use: greenandyellowplantslabelrequest@aphis.usda.gov
For soil, please use: blackwhitegreenyellow.labelrequest@aphis.usda.gov

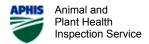
The email must contain the following information:

- hand carrier's name and permit number
- anticipated first port of entry into the United States
- date and time of arrival and method of transport (maritime, land border, air)
- description of the regulated material/organism and packaging used for transport
- travel plans from the first port of arrival to the final destination

The PPQ Permit Compliance Officer will notify the Customs and Border Protection (CBP) Agricultural Specialist at the port of entry to document and facilitate the entry of the regulated material/organism.

If you have domestic (connecting) air travel plans, please contact the Transportation Security Administration (TSA) prior to arrival into the U.S.: TSA Contact Center Telephone: 1-866-289-9673; Email: TSA-ContactCenter@tsa.dhs.gov. Passengers can request special assistance with the screening process via the TSA Contact Center. Although special handling may be requested when traveling with fragile or sensitive items, TSA must conduct sufficient screening to ensure all property does not present a security threat. For more information visit www. TSA.gov.

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Gibbs Smith	07/13/2018





Only the person(s) whose name(s) is/are listed on the issued permit is/are authorized to hand-carry.

- b) The hand carrier must ensure the following:
 - All materials/organisms must be packaged as described in the permit conditions.
 - Packaging material must be free of insects, noxious weeds, and other plants pests and must be treated as described in the permit conditions before discarded or reused.
 - Hand-carried regulated materials/organisms must fit in the plane's overhead bin or under the seat. Hand-carried materials/organisms are not to be checked as baggage/luggage, and must remain on or in close proximity to one's person.
- 21. c) The hand carrier must declare the regulated material/organism at the port of entry. The hand carrier must present acceptable personal identification documents to CBP upon request. The hand carrier must also present a copy and/or permit number of the valid PPQ Permit that authorizes the hand carry.
- d) In the event that a problem is detected, CBP may seize and destroy the package or send it to the nearest PPQ Plant Inspection Station for further processing. The permit holder is responsible for all costs incidental to such actions.
- e) The authorization to hand carry is only for the regulated material/organism identified in the permit. The presence of unauthorized regulated materials/organisms is a permit violation.
- f) After CBP confirmation and clearance through the first port of entry into the U.S., the hand carrier will not open or modify the package (including removal of anything applied to the package by CBP or another Federal Agency) until it arrives at the authorized facility. The hand carried regulated material/organism must be transported directly to the containment facility authorized in the permit. In the event that circumstances beyond the carrier's control cause a significant deviation in transport, the carrier must contact the PPQ Permit Compliance Officer at 866-524-5421 (pests/pathogens, federal noxious weeds/parasitic plants, soil, and host plant materials) or 877-770-5990 (for restricted or prohibited plant material).
- g) Within 24 hours of the first business day of the regulated material/organisms' arrival at the facility, an independent third party (e.g. containment facility director, departmental chair, campus biosafety officer, etc.) must notify the PPQ Permit Compliance Officer via email that the shipment remained sealed until arrival. The notification must include what regulated material/organism was imported, its origin, permit number, date of arrival, and quantity. In the subject line of the email, please write: "Notification of Hand Carry Arrival Permit # xxxx".

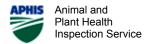
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See 29(a) above for the list of e-mail addresses to use for the notification.

Failure to notify the PPQ Permit Compliance Officer may result in loss of hand carry privileges. A PPO inspector may visit the facility to confirm the arrival of the package and its contents.

22. The permit holder must:

- maintain a valid PPQ 330 permit so long as any portion of the regulated soil remains untreated,
- not assign or transfer this permit to other persons without prior APHIS PPQ authorization,
- maintain an official permanent work assignment, residence, or affiliation at the address on this permit,
- notify the Pest Permit Staff as soon as possible of any change in the permit holder's work assignment, residence, or affiliation,
- notify the Pest Permit Staff of the receipt of unauthorized and/or misdirected shipments of regulated soil,
- adequately mitigate environmental impacts resulting from unauthorized release of the regulated soil,
- notify the Pest Permit Staff if the facility is damaged/destroyed or if you wish to decommission the facility,
- devitalize/sterilize all regulated soil prior to departure from the organization unless other arrangements are confirmed by the Pest Permit Staff.

Notifications to the Pest Permit Staff must be made via 866-524-5421 or pest.permits@aphis.usda.gov within one business day of the event triggering a notification.

END OF PERMIT CONDITIONS

DATE

Permit Number P330-18-00223

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